AMENDMENTS TO THE CLAIMS

1. (Currently amended) An apparatus for determining a channel state of a set top box, the apparatus comprising:

a sensing stage capable to detect light intensity from various positions on a display and generating output signals based on light intensity detected from each of the various positions;

a comparison stage communicatively coupled to the sensing stage and capable to generate digital values by comparison of each generated output signals with a threshold value;

an interface communicatively coupled to the comparison stage and capable to generate a feedback signal based upon the digital values to indicate a channel state of the set top box; and

an output capable to transmit the feedback signal to a companion box device for processing, ~~thereby permitting~~ wherein the companion box device is configured to detect the channel state of the set top box and based on the channel state, to automatically send a command to the set top box to change the channel of the set top box to a predetermined desired channel.

2. (Canceled)

3. (Original) The apparatus of claim 1 wherein the sensing stage comprises a plurality of light sensing devices, each of the light sensing devices capable to detect light intensity at a corresponding position on the display.

4. (Original) The apparatus of claim 1 wherein the sensing stage comprises an array of light sensing devices capable to detect light intensity at the various positions on the display.

5. (Canceled)

6. (Currently amended) A method of determining a channel state of a set top box, the method comprising:

detecting states of light emitting devices in a display of a set top box;

generating an analog value based on each detected state;

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comparing each analog value with a threshold value and generating a digital value for each compared analog value; [[and]]

transmitting to a companion box device a bit stream having the generated digital values to permit the companion box device to determine a channel state of the set top box; and

receiving a signal from the companion box device that causes the set top box to change the channel to a predetermined desired channel if the channel state of the set top box indicates that the set top box is not currently tuned to the desired channel.

7.   (Canceled)

8.   (Currently amended) A set top box channel state system, comprising:

a device including a plurality of light-sensing elements communicatively coupled to a display of a set top box, the display including a plurality of light emitting devices; and

a companion box device communicatively coupled to the light-sensing elements, the companion box device including

an infrared blaster capable to use a code set to send commands via an IR beam to the set top box,

a character recognition engine capable to determine set top box channel state as displayed on the display based on the output of the light-sensing elements,

a channel state analysis engine communicatively coupled to the character recognition engine and capable to determine if the channel state matches a desired channel state, and

a response engine communicatively coupled to the analysis engine and the IR blaster and capable to command the IR blaster, without changing the code set, to send a change channel command via an IR beam to the set top box if the channel state does not match the desired channel state.

9.   (Original) The set top box channel state system of claim 8, wherein the plurality of light-sensing elements is equal in number to the plurality of light emitting devices in the display.

10.   (Original) The set top box channel state system of claim 8, wherein the light-sensing elements are arranged in an array.

11.   (Original) The set top box channel state system of claim 10, wherein the array includes 32 by 16 light-sensing elements.

12.   (Original) The set top box channel state system of claim 8, wherein the device includes a second display configured to display the set top box channel state.

13.   (Original) The set top box channel state system of claim 8, wherein the light-sensing elements include photodiodes.

14.   (Currently amended) A method of detecting a channel state of a set top box, the method comprising:

sampling output from a plurality of light-sensing elements coupled to a display of a set top box, wherein the plurality of light-sensing elements is equal in number to a plurality of light-emitting devices in the display;

determining a channel state of the display based on the output;

comparing the determined channel state with a desired channel state; and

sending a change channel command to the set top box if the determined channel state does not match the desired channel state, sending a change channel command to the set top box to cause the set top box to change to the desired channel state, without changing codes used to configure the change channel command.

15.   (Original) The method of claim 14, wherein the determining the channel state includes using character recognition software.

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16. (Original) The method of claim 14, wherein the determining the channel state includes comparing the output with values in a look-up table.

17. (Original) The method of claim 14, wherein the light-sensing elements are photodiodes.

18. (Canceled)

19. (Original) The method of claim 14, wherein the plurality of light-sensing elements are arranged in an array.

20. (Original) The method of claim 19, wherein the array includes 32 by 16 light-sensing elements.

21. (Original) The method of claim 14, further comprising displaying the determined channel state on a second display.

22-26. (Canceled)

27. (Currently amended) A companion box configured to communicate with a set top box via an infrared (IR) blaster to affect a channel state of the set top box, the companion box comprising:

an IR blaster capable to use a set of codes to send a command via an IR beam to the set top box; and

a channel state recognition circuit in communication with the IR blaster, the channel state recognition circuit including a processor and a plurality of light-sensing elements positioned relative to light emitting devices on a display of the set top box, the light emitting devices indicating the channel state of the set top box, the processor being coupled to the plurality of light sensing elements to receive one or more signals therefrom and determine the channel state of the set top box, wherein the processor is configured to send a command via the IR blaster using the set of codes to change the channel state of the set top box to a particular channel state

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and wherein after sending the command, the processor is further configured to receive one or more signals from the light sensing elements and determine the channel state of the set top box, ~~the processor ensuring, based on the sensed set top box display, that the set top box acted upon the command and changed to the particular channel state~~ and if the channel state of the set top box does not match the particular channel state, the processor is configured to send the command via the IR blaster to change the channel state to the particular channel state, without changing the set of codes used to send the command.

28.   (Currently amended) A companion box configured for communication with a set top box via an infrared (IR) blaster, the set top box having an output with channels over which programming content is communicated, the companion box comprising:

an IR blaster capable to use a set of codes to send a command via an IR beam to the set top box;

a feedback interface configured to produce a feedback signal indicative of [[the]] a channel state of the set top box, ~~wherein the feedback signal is not derived from monitoring an output channel of the set top box over which programming content is communicated but from externally monitoring a light emitting display of the set top box~~;

~~a plurality of light sensing elements configured to monitor light output of light emitting devices that form the display of the set top box, the light sensing elements producing signals indicative of the state of the light emitting devices from which the feedback signal is derived;~~ and

a processor coupled to the feedback interface and the IR blaster, wherein after the IR blaster sends a command to the set top box to change the channel state to a desired channel state, the processor is configured to receive the feedback signal from the feedback interface, and ~~confirm the command was executed by the set top box~~ if the channel state does not match the

-6-

desired channel state, the processor is further configured to cause the IR blaster to send the command to change the channel state to the desired channel state, without changing the set of codes used to send the command.

29.   (Currently amended) A method of ensuring execution of a command received by a set top box from an infrared (IR) blaster, wherein the command is configured according to one or more codes, comprising:

sending a command from an IR blaster to a set top box;

externally monitoring a display of the set top box to determine if the command has been executed, the display being formed of one or more light emitting devices and the monitoring of the display being achieved through positioning one or more light sensors relative to the light emitting devices, the light sensors producing one or more feedback signals indicative of the light emitting state of the light emitting devices; and

determining from the one or more feedback signals whether the command from the IR blaster was executed by the set top box, and if the command was not executed by the set top box, then resending the command from the IR blaster without changing the one or more codes used to configure the command.

30.   (Previously presented) A method of maintaining a channel state of a set top box, comprising:

detecting the channel state of a set top box based on a display of the channel state on the set top box;

generating signal information indicative of the detected channel state;

transmitting the generated signal information to a companion box for the companion box to determine an initial channel state of the set top box;

repeating the steps of detecting the channel state of the set top box, generating the signal information indicative of the channel state, and transmitting the generated signal information to the companion box to determine a current channel state of the set top box;

comparing the current channel state to the initial channel state; and

sending a command to the set top box to change to the initial channel state if the current channel state is determined to be different than the initial channel state.

31. (Previously presented) The method of claim 30, wherein detecting the channel state of the set top box includes detecting a state of light output from light emitting devices in the display showing the channel state of the set top box.

32. (Previously presented) The method of claim 31, wherein the signal information is generated from detecting the state of the light output from the light emitting devices.

33. (Previously presented) The method of claim 32, wherein the channel state is determined by the companion box by comparing the signal information with values in a look-up table.

34. (Previously presented) The method of claim 30, wherein sending the command to the set top box comprises transmitting an infrared (IR) beam from an IR blaster configured to communicate with the set top box.

35. (New) The method of Claim 14, wherein the method is repeated to continuously determine the channel state of the set top box and ensure it matches the desired channel state.

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